UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE: NOV 19 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
MAT Asphalt, LLC, Chicago, Illinois

FROM: David Sutlin, Environmental Engineer, EPA
AECAB (MN/OH)

THRU: Brian Dickens, Section Chief
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: MAT Asphalt, LLC

Facility Location: 2055 West Pershing Avenue, Chicago, Illinois

Date of Inspection: October 28, 2019

EPA Inspector(s):
1. David Sutlin, Environmental Engineer, EPA
2. Jason Schenandoah, Environmental Engineer, EPA

Other Attendees
1. Joe Haughey, Plant Manager, MAT Asphalt
2. Mike Unrath, Plant Operator, MAT Asphalt
3. Paul Maly, Environmental Protection Engineer, IEPA

Contact Email Address: jhaughey@matasphalt.com

Purpose of Inspection: To investigate compliance with rules relating to dust crossing property line and VOC emissions

Facility Type: Hot mix asphalt production

Regulations Central to Inspection: SIP minor source permit that contains limits related to VOC and particulate matter

Arrival Time: 9:00 AM
Departure Time: 10:50 AM

Inspection Type:
☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Credentials Presented
☒ CBI warning to facility provided

The following information was obtained verbally from MAT Asphalt representatives unless otherwise noted.

Process Description:
Aggregate material enters the front of a single-barrel, counter-flow, rotating drum dryer/mixer. The aggregate is dried in the front section of the drum by a natural gas burner. Emissions flow counter to the flow of material and are exhausted from the front end of the drying chamber and controlled by a cyclone and baghouse. The aggregate then enters the mixing chamber, where reclaimed baghouse minerals, reclaimed asphalt pavement (RAP), recycled asphalt shingles (RAS), and liquid asphalt cement are added into the mixing chamber. An additional fan pulls emissions from the mixing chamber back into the dryer chamber near the burner, in order to control for blue smoke. The mixed asphalt exits the back of the drum and is conveyed up to one of five ceramic-insulated storage silos. Trucks are loaded directly from underneath the silos. The trucks then pull forward from the silos to cover their loads with tarps. The facility has three liquid asphalt storage tanks each equipped with a condenser to capture and control volatile compounds.

Staff Interview:
The facility typically produces asphalt from late April until mid-December, and daily until 2:00 PM. The facility uses only natural gas to fuel the dryer and uses the warm mix additive, Evotherm®, from November 1 until the end of the production season. The aggregate arrives at the facility pre-washed with considerable moisture content, which is a limiting factor on the asphalt plant's production rate. The typical asphalt production rate is approximately 270 tons per hour, with a maximum rate of roughly 315 tons per hour. The maximum permitted rate is currently 325 tons per hour. RAP usage is typically no higher than 30% of total tonnage, though commercial applications can use as much as 45% by weight, and very little RAS is used overall. The RAS is relatively fine and therefore is stored under a roof to mitigate dust. Occasionally, an asphalt mix will include steel mill slag up to 29% by weight, according to Illinois Department of Transportation specifications and requirements. RAP is sourced from the company's own street grinding operations, which helps control quality and keep out slag content. Liquid asphalt comes from several local suppliers and can come in different grades, typically 70-28 and 58-28.

The baghouse is inspected daily for visible emissions and pressure drop. Staff also monitors fan amperage as a way to check for bag leaks. EPA was told that the fan amperage can surge when dust is collected on the fan blades; this indicates inadequate PM control because PM is bypassing the filters. The baghouse is equipped with a temperature failsafe system that will alarm at 390°F and shut down the dryer/mixer at 400°F. The typical baghouse outlet temperature is approximately 300°F. An initial baghouse stack test for PM was performed on December 11, 2018, and the facility is planning to retest in conjunction with their pending operating permit.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:
EPA inspectors detected odors at times during the inspection and also smelled asphalt-like odors while driving along West Pershing Avenue, near the entrance to the facility, at approximately 8:45 AM.

In the control room, monitoring equipment indicated production rates fluctuating between 315-320 tons per hour. A baghouse temperature alarm was in effect at one point during the inspection. Mr. Unrath adjusted raw material flow and burner parameters to bring down the temperature at the baghouse inlet.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

- IEPA's review of the December 2018 stack test (from Mr. Maly)
  - Reviewed onsite

CLOSING CONFERENCE

Requested documents:
- Performance test report
- Construction Permit application

SIGNATURES

Report Author: _____ Date: 11/19/19

Section Chief: _____ Date: 11/19/19